

## **Status Of Application**

Claims 48-65, 68-70 and 81-89 are pending in the application. Claims 48-65, 68-70 and 81-89 have been rejected.

## **REMARKS**

### **Claim Rejections**

Claims 48-55, 59-65, 68-71 and 85 are rejected under 35 U.S.C. 102(b) as being anticipated by the English translation of Masaaki (JP 61-046290).

### **Response to Claim Rejections Under 35 U.S.C. 102(b)**

The Examiner states that reference 32, in Figure 4 of the Masaaki patent ("Masaaki 4:32"), is a waveguide because it is capable of guiding microwaves originated from the microwave source to the UV lamp by enabling UV light to pass through it. The Examiner further states that although Masaaki does not explicitly state that Masaaki 4:32 is a "waveguide", in accordance with MPEP 2114, the Examiner is not limited to the terminology employed in the specification.

Applicant respectfully submits that the Examiner is incorrect in his assertion for the following reasons:

1. A "waveguide" is a technical term. Under 35 U.S.C § 112(1), the specification is directed to one skilled in the art. 35 U. S.C § 112(2) states that the specification concludes with the claims. Accordingly, the claims are also directed to a person skilled in the art. A person skilled in the art would interpret a technical term in accordance with his experience in the appropriate field. There is a presumption that technical words in patent documents are

used, and intended to be understood, as they would be used and understood by persons experienced in the field of the invention. See, e.g., Multiform Desiccants, Inc. v. Medzam, Ltd., 133 F.3d 1473, 1478, 45 USPQ2d 1429, 1433 (Fed. Cir. 1998); Hoechst Celanese Corp. v. BP Chemicals, Ltd., 78 F.3d 1575, 1580, 38 USPQ2d 1126, 1130 (Fed. Cir. 1996). The term waveguide is understood in the relevant industry to mean a structure that confines and guides waves, such as electromagnetic, light and sound waves. See Exhibit A.

In simple terms, a waveguide connects a transmitter, such as a microwave generator, with a receiver, such as the UV lamp of Applicant's invention. Waveguides are used in microwave technology to guide microwaves originating from a microwave generator, such as a magnetron, to a receiving area, such as a cooking area. In order to receive the microwaves, the waveguide is connected to the microwave generator. See Exhibit B.

2. Applicant's waveguide can be structurally and functionally distinguished from Masaaki 4:32. MPEP 2114 clearly states that apparatus claims must be distinguishable from the prior art references in terms of structure rather than function. Even if the prior art device performs all the functions recited in the claim, the prior art cannot anticipate the claim if there is any structural difference. MPEP 2114.

- a. Applicant's waveguide is structurally distinguishable from Masaaki 4:32. Masaaki 4:32 is not connected to the microwave generator. The lower end of Masaaki 4:32 is sealed while its upper end opening part is joined with a lower surface of a flange, 16a. See Masaaki English translation, page 11. The flange 16a would, theoretically, block microwaves originated from the microwave generator from reaching the reference characterized as a waveguide by the Examiner, that is, Masaaki 4:32. An important characteristic of Applicant's waveguide is that it completely surrounds the UV lamp, thus confining the microwaves within the waveguide. Additionally, in contrast to Masaaki 4:32, Applicant's waveguide is connected to the microwave generator. See Figure 1 of the Application. As a result, microwave energy is guided from the microwave generator to the UV lamp.

- b. Applicant's waveguide is functionally distinguishable from Masaaki 4:32. As described above, since Masaaki 4:32 is not connected to the microwave generator, it cannot function as a waveguide, that is, it cannot guide microwaves that originate from the microwave generator to the UV lamp. On the contrary, Applicant's waveguide steers or guides microwaves from the microwave generator by connecting to the microwave generator.

Applicant strongly disagrees with the Examiner's contention that Masaaki 4:32 is structurally equivalent to a waveguide or that it functions like a waveguide. While Applicant agrees that the Examiner is not limited by the terminology employed in the specification, in this instance, Masaaki 4:32 is not termed a "waveguide" in the Masaaki specification, it is not structurally equivalent to a waveguide and it does not function as a "waveguide."

Applicant's waveguide is clearly connected to the microwave generator in order to guide microwaves that originate from the microwave generator. Masaaki 4:32 cannot guide microwaves because it is not connected to the microwave generator. The Examiner states that Masaaki 4:32 can guide microwaves. However, the Examiner fails to explain how it can do so when it is not mentioned in the specification. It is also obvious from figure 4 that Masaaki 4:32 is connected to a flange, 16a. It is unclear how Masaaki 4:32 can guide microwaves when it is not connected to the microwave generator.

The Examiner states that Masaaki 4:32 guides microwaves because it is UV-transparent. The Examiner states that since Masaaki 4:32 controls the passage of UV light through its walls, it can also control the flow of microwave energy. However, although the waveguide of Applicant's invention is also UV-transparent, the UV-transparency does not make Masaaki 4:32 the structural or functional equivalent of a waveguide if it is not connected to the microwave generator.

3. Masaaki describes the outermost pipe 32 only as a component of a water circulation

and cooling system (32; 33; 34; 35; 36) and not at all in relation to any guiding of microwaves. Accordingly, it is submitted that the Examiner's suggestion that outermost pipe is a 'waveguide' is unfounded and without any support in Masaaki.

Since 4:32 is not structurally or functionally equivalent to the waveguide of Applicant's invention, Applicant requests that the Examiner withdraw the rejection of claims 48 and 85 and their dependent claims. Applicant requests the allowance of claims 48-65, 68-70 and 81-89.

#### **Response to Claim Rejections Under 35 U.S.C. §103(a)**

Claims 56-58, 81-84 and 86-89 are rejected under 35 U.S.C. 103(a) as being unpatentable over the English translation of Masaaki (JP 61-046290) as applied to claim 48 and further in view of Spero et al. (U.S. Pat. No. 3911318).

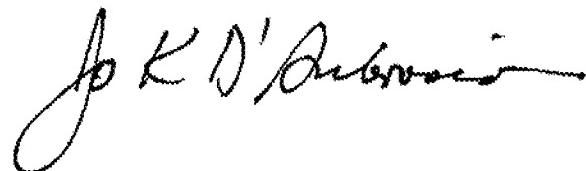
The Examiner states that it would have been obvious to modify the Masaaki waveguide to include the copper conducting mesh taught by the Spero patent. However, as Applicant has described above, Masaaki 4:32 is not structurally or functionally equivalent to a waveguide. Additionally, with regard to the Examiner's reliance on Spero, it has only been relied on for their teachings related to some dependent claims. Spero fails to disclose the above combination of elements as set forth in independent claims 48 and 85. Accordingly, Spero fails to cure the deficiencies of Masaaki.

Applicant requests the withdrawal of the claim rejections under 35 U.S.C. 103(a) and the allowance of claims 56-58, 81-84 and 86-89.

**REQUESTS**

Having responded to each rejection set forth in the present Office Action, Applicant respectfully requests Examiner's withdrawal of the rejection of claims 48-65, 68-70 and 81-89.

Respectfully submitted,



July 26, 2007

---

Jo Katherine D'Ambrosio  
Registration No. 35,671  
D'Ambrosio & Associates, PLLC  
10260 Westheimer, Ste. 465  
Houston, Texas 77042  
Phone: (713) 975-0800  
Fax: (713) 975-0995